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UNIVERSITI MALAYA
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THIS ISSUE

Research University: Reshaping UM Research

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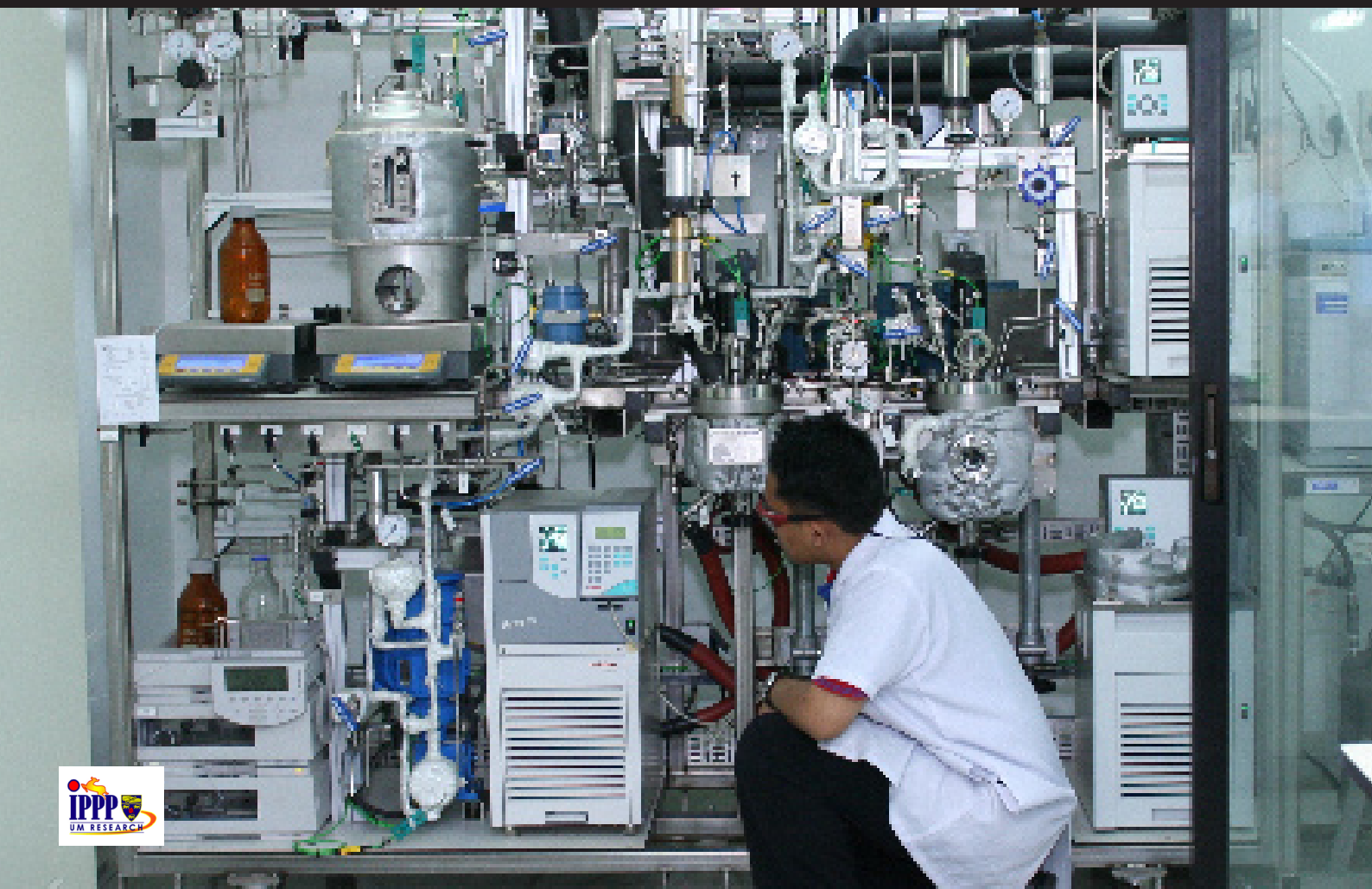

Cacti seedlings growing on a rack

on the cover:
photo courtesy of COMBICAT UM

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Editorial

Research University

Following a research audit in April by the members of an Ad Hoc research committee set up by the Ministry of Education, Universiti Malaya (UM), along with 3 other universities, namely, UKM, USM and UPM, has been formally accorded the title Research University (RU) on October 11th 2006. A total of 11 IPTA's have applied to be accredited as a research university.

What is a research university (RU)? A research university's is an engine of growth of the nation where scholars and students exchange ideas as well as conduct research in a conducive environment that nurtures exploration and creativity to discover knowledge and create wealth, leading towards an improved quality of life". Its vision "to actively participate in new adventures of ideas, experiment with innovative methods, and take intellectual initiatives to further discover and expand the frontiers of knowledge".

Why is it so vital for UM to be accorded the RU status? First and foremost, Universiti Malaya is the oldest university in Malaysia and has been producing leaders in all fields, including research, for Malaysia since 1905. In addition, many researches carried out in UM are at the frontier or cutting-edge technology as proven by the many international publications provided by our researcher at the audit. Even the THES ranking showed the UM's citation criteria to outrank all other local universities. Thus, the UM is well-placed to be recognized as a national research university. Being an RU has many advantages, among which is that the university will be given more autonomy in planning, conducting and financing the many researches carried out in the university.

What does it takes to be an RU? In order to attain an RU status, a university must achieve at least 75% in all the criteria used for auditing. Listed in the next page are some of the research-based criteria used to determine the status of the national RU as compared to a world class RU.

Now that we are a research university, let's all take this golden opportunity and rise to the challenge to be more creative and expand the frontiers of knowledge.

Criteria	RU	World Class RU
Quantity and Quality of Researchers		
Critical mass	60% of academic staff will be involved as Principal Investigator	85% of academic staff will be involved as Principle investigator
Percentage of academic staff with PhD or equivalent	60%	95%
Research Experience (3 cohorts)	With balanced distribution of staff with > 20 years experience, 10 -20 years and <10 years experience	With 60% distribution of staff with >20 years experience, 20% with 10 – 20 years and 20% with <10 years experience
Number of recognitions/ awards/ stewardship conferred by national and international learned and professional bodies	100	500
Quantity and Quality of Research		
Publications	2 papers in national/international refereed and cited journals per staff/year or cumulative impact factor for the institution of not less than 500	5 papers in national/ international refereed and cited journals per staff/year or cumulative impact factor for the institution of not less than 5000
Research grants for S&T academic staff a.Public b.Private (including contract research) c.International	At RM50,000/staff/year of which at least 20% is from international sources and 20% from private sector	At RM1,000,000/staff/year of which at least 40% is from international sources and 40% from private sector
Research expenditure	Should not be less than 60% of grants attained/year	Should not be less than 70% of grants attained/year
Post-docs appointed	10/year	1 post-doc per academic staff
Quantity Postgraduates		
Ratio of PhDs graduated to academic staff	1:18 academic staff of which 60% will be from S&T	1: 3 academic staff of which 80% will be from S&T
Ratio of Postgraduates to academic staff (enrolment)	3 PG: 1 staff	5 PG: 1 staff
Ratio of postgraduates (based on research and mixed mode*) to undergraduates	1 postgraduate: 4 undergraduates	4 postgraduates: 6 undergraduates (1:1.5)
Percentage of international postgraduates	10%	15%
Quality of Postgraduates		
Percentage postgraduate intake	50% of postgraduates with CGPA > 3.0	50% of postgraduates with CGPA > 3.25
Percentage of postgraduate fellowships/ grants from prestigious bodies awarded to postgraduates via research mode	Not less than 10%	Not less than 20%
Innovation		
Number of patents attained/ number of products commercialized/number of technology know-how licensing/ number of IPR/copyrights (including original writings)	30/year	100/year
Professional Services and Gifts		
Income generated from training courses/services/ consultancy/post-graduate student fees/endowment/gifts	Not less than RM20 million/year	Not less than RM20 million/year
Networking and Linkages		
Inter-institution (national) participation	70%	50%
Inter-institution (international) participation	30%	50%
Support Facilities		
Equipment fully operational and calibrated or physical facilities that meet safety and quality standards (accreditation to GLP/ISO17025) or library facilities (min 1 mil titles) or supporting facilities including networking and shared facilities or service centres or access to high end research facilities	On site auditing 75% compliance attained	On site auditing 95% compliance attained

[The Korean Experience: SIIF 2006]

Seoul International Invention Fair 2006
7-11 December 2006

The decision approved by the VC for Universiti Malaya to participate in the SIIF 2006 in Seoul Korea was very much welcomed by UM's researchers involved in innovation expo's for the year 2005 and 2006 since this was the only international innovation expo UM has participated in 2006. Thus, it is natural that the enthusiasms were high and everyone chosen by the IPPP's committee was in full of spirits and eagerness to show their best product for the world to see.

Moreover, SIIF is held only once every two years and the university have to gain some medals. Missing this event would mean that that UM will have a long wait to win medals since the next SIIF will be held in 2008. In April 2005, at the Geneva Convention, the UM has left a mark by winning 19 gold medals, 11 silver medals and 3 bronze medals with 3 special awards, making it a total of 36 awards. This is the highest achievement ever made by a single organization, a record of which UM will surely keep for a long time to come. Hence, the researchers were really keen to keep up with the success in Korea 2006 by winning more medals.

On the 4th December 2006, all the researchers participating in the expo gathered in KLIA at 10.30 pm with a new mission; i.e., to show the world the essence of UM through its research products at SIIF 2006 Seoul Korea. Again, we went with the support and prayers of success from our colleagues and friends in the University of Malaya.

I was blessed on the day itself to be interviewed by the Vice Chancellor, Datuk Rafiah Salim and at the end of the day, at Bilik Lembaga, she wished me and the whole contingent to Seoul, "the best of luck" and reminded us to carry along pamphlets and information about the UM which were to be distributed to the public in Seoul, Korea.

Profesor Dr. Nik Meriam Nik Sulaiman, Director of IPPP and her two beautiful daughters were at the counter G, KLIA to see us off. There are also husbands and wives and children of the participants wishing their loved ones good-bye. "Checking in" process finally finished at 12.30 am on the 5th December 2006.

At 8.30 am, December 5th 2006, we reached Incheon Airport in Seoul, Korea. To our delight, there was Mr. Joseph, the tourist guide waiting with the "UC Travel" playcard to catch our attention. The comfort of getting into the bus specially catered for us banished our anxiety of having to face the icy cold morning temperature of -3 °C. We were then taken to a very comfortable and beautiful hotel in the heart of Seoul called "Coatel Chereville". This is a well-known hotel in Seoul.

December 6th 2006, we were taken to the World Trade Centre (WTC) in the heart of Seoul, and for once we have a glimpse of the venue of the expo. The WTC is a beautiful and massive building and is compartmentalized into shopping complex and arcades and numerous massive exhibitions halls worthy of conducting international seminars and expos.

The entire Malaysian contingents were bundle together in the foreign exhibition sector. The work involving the setting up the posters were easy. The Korea 2006 expo was supposed to be a special one and all of us from the UM have research products of substance to be put on show and be judged. Although everyone was a bit tense, the whole UM team was very eager and in high spirit.

Judging was done on time and, amongst the UM's projects, my project was the first to be judged, the last being Prof. Faisal's project. All judges were Korean and every single project was explained to the judges through an interpreter. Pretty interpreter's and stern judges there are the significant combinations of SIIF 2006.

Finally, after all the hard work and 8 hours of sitting in the booth for 5 consecutive days, came the D-day where the announcement of the results were made. The Korean announcers had difficulties pronouncing Malay, Chinese, Arabic and Persian names in their "sing song" voices and intonation. However, the sequences of the announcement made were such that the winners of the bronze medal were declared first. Yahya Mohd Sahar's name was called first, followed by Hasyim Roslan. In the midst of claps and noises, all the others winners were announced.

We won 5 gold, 4 silver and 2 bronze medals. Thus, the whole contingent won medals and smiles of satisfaction could be seen on everyone's face. Congratulations UM! We did it again, this time in Seoul, Korea!

Assoc. Prof. Dr. Mohd Sahar Yahya








[Professor Dr. Harith Ahmad]

Photonics is an emerging industry and its applications have penetrated most of our daily lives though most of us are unaware of its existence. In Universiti Malaya, Prof. Dr. Harith Ahmad's name has been synonym to photonics and he has been the major force behind the research and development work on photonics in Malaysia. Prof Harith serves on the MIGHT committee as well as with MIDA for the development and promotion of photonics industries in Malaysia. In addition, to date, he has trained eight doctoral and 24 M.Sc. scholars in this area.

Prof Harith is skillful in mathematics and considers maths as the "mother of all sciences". However, he felt that the job opportunities related to mathematics in a developing country like Malaysia is rather limited. Thus, he enrolled in the University of Malaya to read physics in the 1970's since he felt that physics would provide him with more employment opportunities. Hence, he became a scientist by choice. "A career in science was still not the choice of many. However, it is my choice to be a scientist," said Prof. Harith.

After graduating with a degree in Physics, Prof Harith went to the University of Wales in the United Kingdom to obtain his M.Sc. and PhD. degree. He then joined the University of Malaya and is currently a professor in the Department of Physics and is now actively working in research in photonics.

What is photonics? According to Prof. Harith, the science of photonics includes emission, transmission, deflection, amplification and detection of light. The quantum of this energy is photon and photonics is the technology of generating and harnessing light and other forms of radiant energy. The generation, detection, manipulation and harnessing of light are carried out using photonic devices such as lasers, optical, fibre optics, optical fibres-based devices, planar lightwave circuits and electro-optical instrumentation, related hardware and electronics and sophisticated systems. Applications of photonics are numerous in the modern world, ranging from energy generation and detection to communications, information processing, robotics, defence and medicine such as in surgery, vision correction, endoscopy and health monitoring.

Prof. Harith started his career in photonics beginning with laser in 1979. Even then, he was aware that laser will one day become important to the then emerging photonics industry. "Laser is the backbone to photonics. Without laser, photonics would not have developed as we have seen today," said Prof. Harith. He spent a number of years studying and working on laser and has designed and made lasers such as Ruby, Nd:YAG, diode pumped solid-state lasers, polymer-based lasers, dye lasers, non-linear optical oscillator and titanium sapphire.

From laser, Prof. Harith expanded his research to optical fibre-based devices. With the support of the Ministry of Science, Technology and Environment (MOSTE) in the early 1990's, and Telekom Malaysia, Prof Harith embarked into the first IRPA-funded Photonics Laboratory in Malaysia. An IRPA fund of RM 1.2 - RM 1.5 million was granted as seed fund to set up the photonic lab at the Department of Physics, Universiti Malaya. Work proceeded with the development of optical fibre devices, in which Prof Harith and his research team successfully produced fused couplers, optical amplifiers, optical fibres, Brillonin sources, Ring lasers, C-band Edfa and white light sources for Telekom Malaysia. As a result, an additional RM 10 million was granted by Telekom Malaysia to the Photonics lab for all products developed by the lab to be supplied to Telekom Malaysia. This collaboration resulted in 10 patents and 100 international papers on optical amplifiers.

In 1999, the Malaysian Government provided more funds to set up a consortium of photonics research group led by Prof. Harith. This consortium comprised of UM, Universiti Putra Malaysia (UPM), Universiti Kebangsaan Malaysia (UKM), Universiti Teknologi Malaysia (UTM) and SIRIM Berhad. RM 23 Million was allocated to be shared by the consortium members to carry out programmes on photonics research aimed at creating a critical mass. Numerous products were produced by this consortium, some of which were sold to Telekom Malaysia through the Universiti Malaya.

Prof. Harith also led the RM

PROMOTION Technology Transfer and Commercialisation

Tapping Potential in Photonics

Photonics is an emerging industry in Malaysia. What is it and how is it important to modern living? We talked to University of Malaya's Professor, the distinguished Dr. Harith Ahmad, who has made immense contributions to the development and promotion of photonics in the country.

Photonics is a new industry and perhaps, it is relatively unheard of by the masses in Malaysia. But it has surely and quietly penetrated our lives though not many of us are aware of its existence. All we know is that our Internet service must be working, our remote control device responds swiftly and our DVD gadget plays that favourite movies without any problem. These are just some of the applications of photonics. Just as the term sounds unfamiliar to ordinary Malaysians, so do the activities of the people who are behind the development of this new industry in Malaysia. One such name is Prof. Dr. Harith Ahmad, who has played a major role in developing and promoting photonics in the country. He has trained eight Ph.D.s and 24 Master scholars in the field, and he himself holds a Ph.D. in laser technology, as well as a M.Sc. in Ionisation Physics (High Voltage Technology) and B.Sc. (First Class Honours) in Physics.

Prof. Dr. Harith is first and foremost a Scientist. He is attached to the Department of Physics, University of Malaya as a Professor. He is also a Fellow of the Academy of Sciences, Malaysia and Senior Principal Analyst, Malaysian Industry-Government Group for High Technology (MIGHT) under the purview of the Prime Minister's Department. He serves on the MIGHT committee and the Malaysian Industrial Development Authority (MIDA) for the development and promotion of photonics industry. He has written numerous reports on the subject and has also been involved in drawing the master plans and road maps concerning the industry for MIGHT and MIDA.

Prof. Dr. Harith explains that photonics is the technology of generating and harnessing light and other forms of radiant energy. The quantum of this energy is photon and the science of photonics includes light emission, transmission, deflection, amplification and detection. These are carried out with the use of photonic devices, including optical components and instruments, lasers and other light sources, fibre optics, electro-optical instrumentation, related hardware and electronics, and sophisticated systems. Applications of photonics are wide and these range from energy generation and detection to communications, information processing, robotics to defence and medicine (surgery, vision correction, endoscopy and health monitoring).

"Laser is the backbone to photonics. Without laser, photonics would not have developed as we have seen today. Laser can be applied in many industries – defence, manufacturing, assembly and medical, such as eye laser treatment; smartbomb – laser guided missiles; beauty treatment and food. Laser is today the engine of growth. Then, the invention of fibre by CK Kao, UK Standard Laboratory revolutionises communications. If not for fibre, we still not have Internet. Fibre lays the foundation for laser that changes communications, which support broadbands," he explains.

Prof. Dr. Harith becomes a Scientist by choice. His skills are in mathematics but when he enrolled in University of Malaya (UM) in the 1970s, he chose to study physics instead, as he felt physics would give him more employment opportunities. Though he considers maths as the "Mother of all Sciences", the job opportunities related to this subject in Malaysia and in developing countries are limited.

"A career in science is still not the choice of many. However, it is my choice to be a Scientist," he declares. He graduated with a degree in Physics from UM and obtained his M.Sc. and Ph.D. from the University of Wales, the United Kingdom. He started his work on laser since 1979. Even then, he knew laser was important to an emerging photonics industry.

"I spent a number of years studying and working on laser. I designed and made lasers such as Ruby, Nd:YAG, diode pumped solid-state lasers, polymer-based lasers, dye lasers, non-linear optical oscillator and titanium sapphire."

Later, he moved to optical fibre-based devices. In the early 1990s, with the support of the Ministry of Science, Technology and Innovation (MOSTI) and Telekom Malaysia, the first IRPA funded Photonics Laboratory in the Klang Valley was set up. IRPA stands for Intensification of Research in Priority Areas, a programme managed by MOSTI. The laboratory, located at the Department of Physics, UM, was funded to carry out work pertaining to the development of optical fibre devices. The laboratory successfully produced fused couplers, optical amplifiers, optical fibres, fiber lasers, Brillouin sources, Ring lasers, C-band Edfa and white light sources. These were developed for Telekom Malaysia.

The IRPA grant of about RM1.2-RM1.5 million was the seed fund to start the laboratory project. Subsequently, Telekom Malaysia provided additional funding to the tune of RM10 million. Part of the deal was that the products developed by the laboratory were supplied to Telekom Malaysia, which later patented 10 of them. The generated products were all optical amplifiers. 100 international papers on optical amplifiers were also produced to contribute to the knowledge of science.

In 1999, the Government provided more funds to set up a consortium of photonics research group comprising UM, Universiti Putra Malaysia (UPM), Universiti Kebangsaan Malaysia (UKM), Universiti Teknologi Malaysia (UTM) and SIRIM Berhad. The allocation of RM23 million was shared by the universities to carry out the research programme on photonics. Prof. Dr. Harith led the programme aimed at creating critical mass to develop photonics. The group produced numerous products, some of which were sold to Telekom Malaysia through UM Today. Funding for this project has stopped and only minimal activities are carried out.

In 2002, MOSTI provided RM16.9 million to develop optical waveguides. Four universities were mobilised to implement the project. The universities were UM, USM, Universiti Teknologi MARA (UiTM) and Multimedia University (MMU). Prof. Dr Harith was again called to lead the project. Prof. Dr. Harith is currently developing new photonics products for telecommunication applications i.e. fibre to home, which is another project for Telekom Malaysia. The products are optical splitter and arrayed-waveguide grating (AWG), which are largely deployed in fibre to home network (FTTH network). He says in the pursuit of ever higher bandwidth for home users, an evolution in FTTH technology to provide more bandwidth per user is inevitable in the near future. As FTTH network technology is still in the planning phase in most countries, planar optical passive components (including optical splitters and AWGs) have a huge market potential both in Malaysia and overseas.

Prof. Dr. Harith also leads the development of new designs using complete fabrication facility in the Optical Planar Waveguide Laboratory under the Photonics Laboratory. The facility can produce various passive waveguide devices on wafer. Two devices, namely 1 x 8 cleaved beam-splitter and 16-channel arrayed-waveguide grating on 4" wafers are ready for commercialisation. The project, which began in 2002, was also funded by MOSTI under the IRPA scheme.

According to Prof. Dr. Harith, photonics products researched and developed under IRPA and carried out at UM have commercialisation potential. However, he says there is no proper mechanism to mobilise the commercialisation. "The technical aspects have to be resolved, so do the administrative issues and legal aspects concerning MOSTI and the university. The beneficiary should be the researcher and it has to be worth it," he stresses.

With the industry being still in its infancy stage, the full potential has yet to be fully tapped. For Prof. Dr. Harith, the sky is the limit and the Scientist in him will certainly persevere.

16.9 million project funded by the Ministry of Science, Technology and Innovation (MOSTI) in 2002 to develop optical waveguides. Four universities were involved in the project, namely UM, Universiti Sains Malaysia (USM), Universiti Teknologi Mara (UiTM) and the Multimedia Universiti (MMU).

Currently, Prof Harith is involved in a fibre-to-home project for Telekom Malaysia to develop new photonics products for telecommunication applications. The products being developed are optical splitter and arrayed-wave grating (AWG) which are largely fitted in fibre-to-home network (FTTH network). Since the FTTH network is still in the planning phase in most countries, planar optical passive components such as opical splitters and AWG have a huge market both locally and overseas. However, Prof Harith believes that in the pursuit of ever higher bandwidth for home users, an evolution in FTTH technology to provide more bandwidth per user is inevitable in the near future.

In addition, Prof. Harith also leads an IRPA-MOSTI project on development of new designs using complete fabrication facilities at the Optical Planar Waveguide Laboratory under the Photonics Laboratory. Two devices, namely 1 X 8 channel beam-splitter and 16-channel arrayed-waveguide grating on 4' wafers have been developed and are now ready for commercialization.

The full potential of the photonics industry is still untapped. For Prof Harith, this is a golden opportunity and we can be certain that the scientist in him will persevere for to him, the sky is the limit.

28 Year old Faisal Rafiq Mahamd Adikan is

Research Personality

[Faisal Rafiq Mahamd Adikan]

lecturer at the Department of Electrical Engineering, Universiti Malaya. Faisal Rafiq received his B. Eng (Hons), degree in Electrical Engineering and Electronics from the University of Manchester Institute of Science and Technology (UMIST) in 1997. He then continued his studies at the graduate level and obtained his Master of Engineering Science (M. Eng. Sc.) from the Universiti Malaya in 2001. After beginning his career as a lecture at the Universiti Malaya in 2001, Faisal Rafiq was awarded the Hadiah Latihan Skim Program HRD S&T Universiti Malaya in the field of Advanced Manufacturing Technology (AMT) to pursue his PhD studies at the Southampton University in the field of Advanced Manufacturing Technology (AMT). Apart from his academic career, Faisal Rafiq has also experience working in the private sector. He was a director at Formsys in charge of computer sales in 1999 and a senior engineer and business development executive with Significant Technologies Sdn Bhd and a director at Netsapienz Sdn. Bhd. Prior to joing the Universiti Malaya.

[PhD student wins prize for best engineering research at the House of Commons]

Faisal Rafiq Mahamd Adikan received the Section Prize for the best Engineering research at a Reception for Early-Stage Researchers last Tuesday. Rafiq, a PhD student from the Optoelectronics Research Centre (ORC) at the University of Southampton, was presented his certificate and £1000 at the reception at the House of Commons.

His award-winning poster illustrated Rafiq's current work on integrated optics, which are gaining an increasing foothold on the biosensor market. Biosensors now play a vital and essential role in homeland security, medicine, industry and the environment. Rafiq is currently on study leave from the University of Malaya, Malaysia, where he is a lecturer in the Faculty of Engineering. His PhD is sponsored by the Ministry of Science, Technology and Innovation (MOSTI), Government of Malaysia.

Rafiq was one of three PhD students from the ORC chosen to present posters on their current research at the Reception. A total of 91 posters by top UK researchers including research students, postdocs, university lecturers and industrial researchers were chosen out of more than 150 applicants. The successful posters presented a panorama of high-quality and ground-breaking UK engineering research and development.

Rafiq (right) with his award-winning poster and his Supervisor - Professor Peter Smith

Over 50 MPs attended the event, which aims to encourage networking and engagement between younger researchers and politicians. It is one of a range of events aimed at supporting and promoting the work of Britain's younger research scientists, engineers and technologists - researchers who will be making a significant contribution to the future development of the UK's research base, and will become the country's scientific leaders of the future.

Despite the Mountbatten fire in October of last year, the ORC continues to produce world-class research output and this achievement is one of the many examples of the ORC's resilience.

Article extracted from Light (Optoelectronics Research Centre, Southampton University)

[Malaysian Toray Science Foundation (MTSF) Award]

Ms Cindy Teh Shuan Ju and Ms Ng Woan Shien were amongst the 11 recipients of the 2006 MTSF Science and Technology Research Grant. The grant was presented by the Minister of Science, Technology and Innovation at a ceremony held on the 13th December 2006 at the Nikko Hotel, Kuala Lumpur. Both winners received RM 30,000.00 to cover the cost or equipment and/or consumables required for their project.

Cindy Teh comes from Johor and she received her B.Sc (Hons) from the University Sabah Malaysia in Conservation Biology in 2005. She is currently pursuing her M.Sc degree under the supervision of Prof. Thong Kwai Ling at the Institute of Biological Sciences in the Faculty of Science and her award winning project is entitled DNA and Protein Based Assays Salmonella Enteriva Serovar Paratypi A. The aim of her research is to develop a specific DNA marker for rapid detection of Salmonella enterica serovar Paratyphi A with the polymerase chain reaction (PCR) technique and to enhance a specific detection of Salmonella Paratyphi A in clinical and non-clinical sample.

Ng Woan Shien received the Toray Science Foundation, Japan award for her research project is entitled Molecular Taxonomy and Phylogenetic Analysis of Malaysian Sargassum Species (Sargassaceae, Fucales). Ng Woan Shien comes from Penang and received her B.Sc. (Hons) from the Faculty of Science Universiti Malaya in 2005. She is currently reading her M.Sc. under the supervision of Prof. Phang Siew Moi. The main objective of her study is to investigate, identify, analyse and validate different taxa in Sargasum, combining both molecular and mophorlogical characteristics. This approach will provide more comprehensive data on the relationships among Sargassum species in Malaysia and clarify their exact identity of the taxa. The analysis of the data will provide the understanding of the phylogenetic relationship between Sargassum species and its closely related species.

[National Institute of Infectious Diseases, Japan]

As part of a collaborative research amongst researchers in the PulseNet Asia Pacific region, two researchers from Universiti Malaya have been awarded research grants by the National Institute of Infectious Diseases, Japan.

Prof. Dr. Thong Kwai Lin from the Institute of Biological Sciences, Faculty of Science has been awarded a research grant of 2 million year for a project entitled Genotyping of Salmonella and Burkholderia pseudomallei in Malaysia.

A second recipient of the research grant amounting 1 million yen is Professor Dr. Suresh Kumar a/l Govind (Faculty of Medicine) on the project entitled Phenotypic and Genotypic Diversity of Emerging Protozoans in Malaysia, Indonesia and Thailand.

Professor Dr. Thong Kwai Lin

[Special IRPA (2006) Grant]

Professor Rosmawati Mohamed and Prof. Jamunarani Vadivelu from the Faculty of Medicine were awarded a special IRPA (2006) grant amounting RM 3,000,000.00 by the Ministry of Science, Technology and Innovation (MOSTI). The project entitled "Development of Molecular Diagnostic Kit for Genetic Diseases Expressed in Human Blood Specific to Familial Hypercholesterolemia" is a joint-venture between Universiti Malaya and GENERTI Biosystem Sdn. Bhd.

[Science Fund (MOSTI)]

A total of RM 18,896,774.00 has been awarded to the Universiti Malaya in the recent announcement of the Cycle 1/06 for the Science Fund allocation by the Ministry of Science, Technology and Innovation (MOSTI). This amount will be supporting a total of 109 projects from four different categories for the next 2 year. The breakdown for the grant according to the categories is as follows:

Clusters	Amount (RM)
ICT	3,292,530.00
Biotechnology	6,286,319.00
Industry	6,416,165.00
Sea-t-Space	1,929,440.00
Agriculture	972,320.00
Total	18,896,774.00

[Fundamental Research Grant Scheme]

The Ministry of Higher Education (MOHE) has recently announced the results for the cycle 1/06 of the Fundamental Research Grant Scheme (FRGS). Funding is approved for research projects based on three categories:
1. Category A for Highly Recommended Projects; 2. Category B for Recommended Projects, and;
3. Category C for Not Recommeneed Projects.

A total of 41 research projects from Universiti Malaya have been recommended for funding with the grant allocation amounting RM 4,692,296.25.

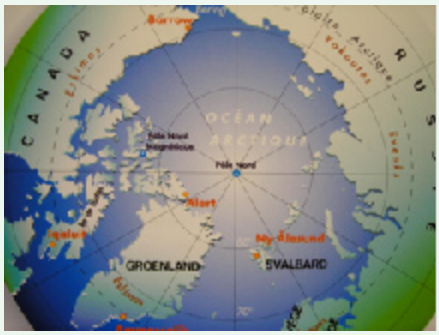
[EXPEDITION TO AN ARCTIC STATION, NY-ÅLESUND, NORWAY]

a first-hand account by
Associate Professor Dr. Irene Tan Kit Ping
Institute of Biological Sciences, Faculty of Science, UM

. . . [background]

The University of Malaya (UM) has been involved in the Malaysian Antarctic Research Programme (MARP) since the latter's inception in 1999, and currently 5 research projects in MARP are headed by UM academic staff. These projects are vibrant and active, and the members (staff and graduate students) travel to Antarctica every year for field work. In UM currently, there are 5 PhD and 5 Master degree students involved in polar research in the MARP. The Scientific Committee for Antarctic Research (SCAR), an international body that governs such research, has designated 2007 and 2008 to be the International Polar Year (IPY) which aims to facilitate intensive multi-national and multi-disciplinary research. 3 projects from UM have been selected for participation in this IPY 2007-08 (http://www.ipy.org/development/eoi/search.php). As Malaysia does not have a research station in Antarctica nor in the arctic, project leaders spend considerable time and effort to establish collaboration with scientists from other national polar programmes to (1) have access to the research stations and facilities, and (2) get guidance and training in the field work. We now have collaboration with New Zealand, Australia, UK, South Africa and India for Antarctic research. In July 2006, a Memorandum of Understanding was signed between the Academy of Sciences Malaysia (which manages MARP) and Korea Polar Research Institute (KOPRI), and under this umbrella, a scientist-to-scientist MoU was signed between Dr. Irene Tan Kit Ping from UM (and a project leader of MARP) and Dr. Lee Hong-Kum from KOPRI. This MoU is for collaborative research in "Biological and Functional Diversity of Polar Microorganisms". KOPRI has research stations in Antarctica as well as in the arctic, the latter being an attractive feature as we now could have access to arctic environmental samples for comparison with our antarctic samples. This wish saw fruit when KOPRI extended an invitation to Dr. Irene Tan and 2 colleagues to visit Dasan station in Ny-Ålesund, Norway. Assoc. Prof. Dr. Irene Tan (expedition leader), Prof. Dr. Phang Siew Moi and Assoc. Prof. Dr. Siti Aisah Alias each heads a project in MARP focusing respectively on bacteria, microalgae and fungi. This marked the first time Malaysian scientists go to the arctic for research.

On 17 July 2006, 3 eager scientists, Irene, Siew Moi and Siti Aisah, from the Institute of Biological Sciences, UM arrived in Ny-Ålesund after a 20 hour journey from Kuala Lumpur via Amsterdam, Oslo and Longyearbyen. We flew into Ny-Ålesund by helicopter, a more dramatic mode because the usual 16-seater plane had problems that day. It was cramped inside the helicopter and we had to wear ear-muffs



Ny-Ålesund in the arctic circle

Feature Article

Ny-Ålesund, Svalbard, Norway

to block off the loud noise. Nevertheless, we were awed by the view of the mountains and glaciers. The helicopter landed at the "airport" (actually a small bare strip of land) in Ny-Ålesund and a van transported us to the village, a 5-minute ride away. Located at 79°N, Ny-Ålesund is touted to be the world's northernmost community. It is on the northwest coast of Spitsbergen, the largest island of the Svalbard archipelago lying north of mainland Norway. Formerly a coal-mining settlement, Ny-Ålesund is now a centre for international arctic scientific research and environmental monitoring. It consists of about 50 buildings which include the research stations of several nations: Norway, Germany, France, Japan, UK, Italy, Korea, and China, the lone "Nordpol" ho-

Phang Siew Moi, Irene K.P. Tan, Siti Aisah Alias

tel, the post-office, a museum, a souvenir shop, and the very modern Arctic Marine Laboratory which has well-planned labs, set-temperature rooms, minus 80°C freezer, liquid nitrogen, and diving facilities. These facilities are available for rental by visiting scientists. It is located near the pier where several motor boats (6-seaters) are parked. In summer, cruise ships come regularly to allow tourists to come ashore

The post office

The only hotel

At the entrance to Dasan Station

L-R: The Mess, Chinese station, South Korean & French Station

MOsses

Mosses

Geese

Beware of polar bears

for about an hour to stroll around the village, visit the museum, buy souvenirs and send postcards. These facilities are only open during such visits. Ny-Ålesund does not allow tourists to fly in for extended stay. Only scientists and the odd artist (all with approved activities), and the service and maintenance personnel are allowed to stay. In summer, the population is around 100, in winter it's about 40. A communal building, called the Mess, serves all meals and has laundry facilities, a seminar room and lounge, and is a centre for socializing.

Irene, Siew Moi and Siti Aisah stayed at Dasan station which shares a building with the French Rabot station. Dasan has a well equipped office with good telecommunication and internet access (phones, fax, computers, printers), comfortable lounge (TV, video players), kitchenette (fridge, microwave oven, kettle), toilet, shower, and we each had a bedroom to ourselves (so did the other 3 Korean scientists who were there). Its laboratory has basic equipment such as autoclave, laminar flow chamber, freezers, fridge, microscopes.

The warmest part of the day seemed to be between 2-5pm with the temperature sometimes reaching 8°C, the rest of the day and night would be between 2-5°C. We needed to wear 3 layers of clothes outdoors. The temperature could dip tremendously if it was cloudy or when there was wind. Then, we had to cover our faces (except for the eyes) to keep out the cold. Indoor temperature in most buildings was maintained at a very warm 20°C, and we had to change our outdoor shoes to slippers whenever we get into a building, so we had to keep putting on or taking off clothes and shoes whenever we leave or enter a building. As it was midsummer in Ny-Ålesund, there was 24 hour sunlight and it did take a bit of getting used to to fall asleep at "night" when it was still bright and sunny!

Wildlife and nature in Ny-Ålesund

We saw much wildlife such as the barnacle geese, arctic tern, arctic fox but only a few Svalbard reindeer. This is polar bear country and anyone venturing outside the village must carry a rifle – not to kill as all wildlife is protected here but to scare off the polar bears as they are known to predate indiscriminately including humans. It was a small disappointment that we did not see any polar bear during our stay. The foxes are unafraid of humans and whole families including baby foxes would scamper and frolic among the buildings. Prominent notices are displayed in the village to not feed any wildlife. The adult foxes had bountiful catches of goslings much to the dismay of the bird scientists who predict that the geese population would not be increased this summer. The active wildlife is also evidenced by the copious amount of animal droppings, especially around the lakes where the geese roost. Other scientists taught us to differentiate between the droppings of foxes from reindeer. The higher diversity of wildlife distinguished Ny-Ålesund from the stations in continental Antarctica. Visibly, there were also more mosses, lichens, mushrooms, other fungi, and grasses in Ny-Ålesund.

. . . [Fieldwork]

As this was a first visit, our stay in Ny-Ålesund was a short one-week (17-24 July 2006) which was sufficient for us to get a feel of the environment and to venture to different sites, at each of which we collected soil, sediment, tiny rocks, ice and water samples. We also measured the GPS (precise latitude and longitude), altitude, air and soil temperatures, and light and UV intensities at each sampling site. The sites were generally classified as disturbed/impacted or pristine. All sites within the village boundary are considered

Collecting tundra soil

Collecting ice from the glacier

Out at sea in dry suits

Boat jetty

disturbed/impacted because of human activity. The scientists were mostly friendly and helpful. On learning of our desire to venture to the pristine sites, Dr. Maarten Loomis, a bird scientist from the Netherlands, volunteered to guide us on a trek to the tundra outside the village. Of course, our Korean host scientists also took us to the glaciers and inland lake which are the undisturbed sites. Being mid summer, much of the glaciers have melted and we had to travel further to the hills to reach the ice.

Siew Moi rented a boat to go out to sea to collect water for phytoplankton analysis. It was an experience getting into and out of a "dry suit" which is compulsory for anyone heading out in a boat.

Studies with the arctic samples

Irene's group analyses the bacterial community in the soil and sediment samples by using molecular techniques to include the culturable as well as unculturable species. Total genomic DNA is extracted from the samples, then the 16S rRNA gene fragment is amplified by Polymerase Chain Reaction (PCR). This is the highly conserved region in bacteria and the base sequence of this fragment identifies the species. 16S rRNA gene fragments from different sites are assayed together in Denaturing Gradient Gel Electrophoresis (DGGE) which separates the fragments into a series of bands. Theoretically, each distinct band represents a different bacterial species. When the samples are run side by side on the DGGE, their respective banding patterns indicate how similar or dissimilar the bacterial communities are between the sites. The bands are excised, amplified again and the gene fragments are sequenced for species identification. The soil and sediment samples are also analysed for moisture, pH and chemical composition, e.g. for carbon, nitrogen, phosphorus, sulphur and minerals. These data would be correlated with the bacterial community to try and derive functional roles for the bacteria. Isolation of bacterial colonies will be attempted and the isolates will be screened for the production of bioactive compounds, e.g. storage materials, enzymes and antimicrobials. Similar studies as described above are conducted on environmental samples collected from continental and maritime Antarctica. The data obtained will be used to compare bacterial communities in ecologically distinct sites (impacted and pristine ones) within and between the polar regions.

Siew Moi's and Siti Aisah's groups will isolate and identify algae and fungi respectively and compare their diversity with those found in Antarctica and in the Tropics.

. . . [Acknowledgements]

We thank KOPRI for this opportunity to visit their arctic station, the Ministry of Science, Technology and Innovation (MOSTI) for financial support, MARP for management and logistics support, and UM for granting us research leave.

Feature Article

The *Science Citation Index* and research in the sciences: Knowing what others publish so that we can publish our own

by
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The guidelines for defining the scope of the integrity of the (chemical) research process have already been formulated (Vaughan, 2001), and most of these are embodied in the code of ethics of various professional societies. The code of ethics spells out the aims of research, chief of which must surely be the free pursuit of knowledge; by adhering to these norms, a researcher implicitly agrees to share information, in the processing learning to trust collaborators. Furthermore, because research is usually funded by public money, the researcher is accountable for the money that is spent (Resnik, 2005). In the US, some universities require students to pass a course in research ethics if they want to work on government-funded projects (Lawson, 2002). Unfortunately, the integrity of research has recently attracted unwanted attention with the highly publicized case of falsified stem-cell data in Korea.

Scientists have a responsibility to disseminate work that, hopefully, forms the basis of new technology that benefits humankind. They are duty-bound to publish their work in a reasonably short time on completion of the study. They should, as far as possible, restrict themselves if they have to work in areas that have the potential of developing weapons through a sort of a Hippocratic oath. Although matters are left to the individual researcher, it must be remembered that peer review of the research report does not prevent deception and neither does it guarantee the truth of the findings (Lee & Biro, 2006), as is the case with the Korean stem-cell papers.

Aside from the instructions to authors that appear in journals, there is must less written on citation of sources that the author used for the work. After carrying out a literature search, an author is ethically obliged to locate and then cite those original publications that are thematically related to the work. It has been argued that omitted citations should be interpreted as a form of plagiarism (Syrett & Rudner, 1996).

What good research is or should be can only be described in vague terms; indeed, research cannot be research if the outcome is predictable. Man is speculative as well as reflective, two impulses that underscore systemic and sophisticated thinking known as philosophy (Wolff, 1969). In contrast, examples of bad research abound, and they are not necessarily limited to the fabrication and falsification of results only. Plagiarism is but one facet of unethical research. Whether any work is ethical as well as responsible has to be judged individually; three examples of bad research are presented.

In the first case, the effect of Agent Orange on the American soldiers who served in the Vietnam War was studied by the US Air Force, which was able to show a cor-

relation between exposure of the herbicide and cancer. However, one member of the review committee that published the study criticized the final report on the grounds that the control group was stationed in Vietnam (Trewyn, 2005); this potential flaw alone should have rendered the comparison study scientifically unsound. Because of the flaw, the study may also be unethical and irresponsible to the families of the Vietnam veterans. It will be particularly worrisome if the study is used to support a lawsuit for compensation against the chemical manufacturers owing to the emotionally sensitive nature of the war.

A particularly bad example of a highly cited paper is the cold-fusion paper (Fleishmann *et* al., 1989), the work being highly cited because others could not reproduce the results. The researchers contended that it was possible to fuse nuclei in the laboratory. The first two researchers blamed their university authorities for pressuring them to rush the publication without verifying its reproducibility, thereby passing the buck. (The third author was dragged into the mud.)

The decision by the head of Malaysia's astronaut program to carry out a 'physics experiment to see what happens to tek tarik in space' (news report on 4 September 2006) seems to exemplify a waste of resources as no useful information will be derived from the outcome; the experiment is not a physics experiment in the first place. His words, unfortunately, were taken out of context as real physics experiments are indeed planned. The Academy of Sciences, which helped in designing some of the experiments, decided against clarifying the issue with the press in the interest of keeping non-scientists from interfering as some of the experiments will be difficult for the public to comprehend. On the other hand, there are many reports published by local researchers from universities and research institutes on heavy metal contamination in shellfish (such as clams and oysters). The reports carry the implication that the consumption of such shellfish will be harmful to humans who consume them. Regrettably, the authors do not know that toxicity is not related to any physico-chemical property such as density; in fact, the International Union of Pure and Applied Chemistry has never defined the term 'heavy metal' at all. More than half the elements in the Periodic Table are metals, and on the basis of atomic weight, calcium is only slight lighter than chromium, a metal this is commonly dumped into rivers in the form of chromate ions. Gold and platinum, if they were toxic, would not be worn as decorative ornaments. The issue of 'heavy mteals' in shellfish should not be viewed in the narrow confines of toxicity only, but in the broad context of biomethyllation. An excellent example is provided by the case of mercury poisoning of the Minamata bay in Japan in the 1960s; the episode can be regarded as the birth of research on the biomethyllation of metals.

Citation indices and the ranking of universities

The *Times Higher Education Supplement* assigns a 20% weightage to its ranking of universities on the basis of the quantity and quality of science-based research. The quality and quantity contribute 30% to the University of Malaya's status as a research university. The indicators are computed based on information from the Institute of Scientific Information's *Science Citation Index*, a database that condenses bibliographic information from 6,400 of the world's leading science and technical journals covering more than 150 disciplines. The *SCI*'s bibliometric indicator, the *Impact Factor*, is now the primary quantitative measure of the quality of a journal and the articles that are published in the journal. In fact, the indicator is extended to the researchers who carry out the research as well as to the institutions in which the research was carried out. (The *Social Science Index* is not used for such purposes.)

Arguments have been made for, and against, self citation, and indeed, the whole idea of citation analysis has been questioned (Seglen, 1997). This has even been discussed at length, off-and-on, within the scientific community in UM. However, just as it is not the time to critique a zoological treatise on the *Aedes Egyptii* when the campus is faced with an outbreak of dengue fever, it is not the time now to debate the reliability of the *SCI* either. Citation analysis is a complex matter (Zuckerman, 1987); whether our academics embrace citation indexing or not, citations and *Impact Factors* <u>are</u> used by funding agencies in other countries as basis for accepting or rejecting grant applications. Because the *Impact Factor* monitors how a journal gets citations to its articles (it is computed from the number of citations a given article receives after the publication year), if an article is more cited, then that article has been made use of by others, and must therefore correspondingly represent a greater contribution to the advancement of knowledge. In fact, citations now make-or-break a journal, and journals have online articles to boost citations because online work is more highly cited (Lawrence, 2001). A number of online journals publish an advance Web version.

The SCI as the platform for ethical and responsible research

It is generally believed that Gregor Mendel's work on genes was not even noticed by his contemporaries before being re-discovered around 1900, but historical documents show otherwise. There is a lot of talk of work that is not cited, estimated at around 10% (that is supposed to be gathering dust somewhere) but this is disputed as some 90% is already cited even by the 1970s (Garfield, 1970). The case of Rosalind Franklin being excluded from the Nobel Prize for the discovery of the structure of DNA represents a case of intentional omission of citation. Her photographs were shown to James Watson; with hindsight, it is possible to calculate the distance between the base pairs and the pitch of the helix (Watson, 1981). Her work is now known to be crucial to the discovery.

A universal citation index database that records every work ever written is being planned and various models have been proposed. The database will, hopefully, rate all publications fairly, and will allow the work to be judged without a measurement bias (Cameron, 1997). Presently, the *SCI* can fulfill this gap if the local universities subscribe to the Web of Science® online by forming a consortium to buy the full database (that goes back the last 50 years). The database can be used, for example, to work out the average cost of one *Impact Factor* point.

Yet, despite the emphasis placed on research, there has been no clear directive by MOSTE to publish in reputable journals. One possible reason for our researchers not publishing in such journals is that they may be unaware of what these reputable journals are! Breaking into the international circuit will generate exposure collaborators from world-class universities.

Where the core of research is

A mere 500 journals account for 50% of what is published and 75% of what is cited (Garfield, 1996*b*). Research in the medical sciences on topics concerning life and health constitute the core of research, and

some fields will always be relegated to the periphery (e.g., cancer research will dominate allergy research) for exactly the same reason that cookbooks outsell health books. Some universities in other countries encourage publication in high *Impact Factor* journals by offering offer cash rewards; in China, the quantum is pegged against it. Academics in Malaysia list their research publications in university yearbooks and prospectuses, and local universities assert their reputation on the amount of funds given to researchers, so that a better funded research institution must be better than a lesser funded one. The paradigm is inherently false: money alone cannot thrust research 'beyond the frontiers of knowledge' when research may not have even crossed the threshold of knowledge. Universities seem to establish centers of excellence without first verifying if there indeed is a critical mass to move research. Real or dubious claims of excellence can be readily verified by checking the posted publications with the list of journals in the SCI. Citation analyses should be able to expose well-funded researchers who publish only in local journals; poorly-funded but well-cited researchers are known to publish in top-class ones (Garfield, 1996a). The Science Citation Index serves as a platform for the promotion ethical and responsible research in the sciences.

A case of an unethical publication

Plagiarism involves claiming credit for work that is not performed by the researcher, but plagiarism is not necessarily restricted to this aspect only. An unusual case of plagiarism involves a well-respected researcher who published the same work almost simultaneously in two different journals (Li et al., 2002a; Li et al., 2002b). Other than for a different set of authors, the two papers are identical.

The work is technically unsound, which allowed others to revise the results. (It must be noted that journals do not have a policy for publishing corrections, unless the correction is published by the original authors as a corrigendum.) The revision, effected mathematically, was published by others (Ng & Hu, 2004) after requests for data were turned down. Someone not belonging to the authors' university would have little reason to accuse the original authors of plagiarism, so that one has to read between the lines of the revision paper; moreover, the journal that published the revision would not have permitted such a strong statement anyway. The mathematical revision is proven to be correct, as confirmed by a recent experimental, albeit serendipitous, study (Li & Cao, 2006).

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Seoul International Invention Fair 2006 (above)
Biotechnology Asia 2006 (below)







Research, Inventions & Innovations Exposition UM 2006 (above)

MTE 2007 (below)




[BIO MALAYSIA 2006]

The Bio Malaysia 2006 held from 6th – 8 Dec 2006 at the Kuala Lumpur Convention Centre (KLCC) is the most important event in promoting Malaysia as a global bio technology hub. It was officiated by Y.A.B Dato' Seri Abdullah Haji Ahmad Badawi, the Prime Minister of Malaysia and this year's theme is "Malaysia: A Global Biotech Hub: Leveraging Resources, Fostering Innovation, Creating Wealth".

Comprising international conference and exhibition section, the Bio Malaysia 2006 has successfully brought together experts from local and international involved in the biotech industry including researchers, sponsors, renture capitalists, entrepreneurs, financial institutions, government agencies and the universities to deliberate and seek collaborations, networking, investment and market potentials as well as to exchange of information. It was also intended to provide better understanding among the general public on biotechnology and the industry as a whole.

In line with the theme, the exhibition drew a lot of interests among the industry players and other participating agencies. Hence, there are ample opportunity for the participants to forge better understanding and rapport with the sponsors and relevant ministries involved in promoting biotech research and biotech industry development. The Universiti Malaya, being one of the pioneers in biotechnology research, had participated in the exhibition showcasing some major research work carried out in the university involving strong industry linkages. These include such programs on gingers, ornamental, herbs and biomedicals. In this event, number of contacts were established for possible collaboration and research networking.

The conference covered a wide range of topics including the services, product development, the industry and the finance and business development. Setting the phase for a lively and thought provoking presentation and discussion with a paper on 'A value proposition for the Biotech Industry' was Tan Sri Datuk Dr. Ahmad Zaharudin Idrus., the Chairman of the Malaysian Biotechnology Corporation Sdn. Bhd., Malaysia. Another distinguished speaker, Prof. Jean-Claude Cherman, President of Scientific Director, URRMA R&D, France spoke on "25 years After The First AIDS Case, The situation of the research on HIV 23 Years After The First Isolation of HIV". Over the next 3 days many distinguished international speakers from Switzerland, Japan, Venezuela, USA, China, Australia, UK, India, Germany and Scotland shared their valuable knowledge and experiences with the participants.

Universiti Malaya was represented by Prof. Rofina Yasmin Othman, Head of CEBAR, who delivered 2 papers i.e, 'Future Directions of Malaysian Agri-Biotechnology' and 'Dual Application of Plant – Virus-Based Nanobioparticles Displaying Hepatitis B Epitope'. The third day saw a series of panel discussions touching on issues like funding mechanisms, Intellectual Property valuation and lastly the ethical, legal and Social Implication (ELSI) of Biotechnology.

The Bio Malaysia exhibition and conference came to a close with simple closing ceremony by Y.B. Dato' Sri Jamaludin Mohd Jarjis, the Minister of Science, Technology and Innovation, whose speech was read by Tan Sri Dr. Ahmad Zaharudin Idrus.

The Minister recorded his appreciation on the success of Bio Malaysia 2006. He noted that more than 5000 trade visitors from 16 countries attended the event which 1400 delegates and 130 booths from 80 organizations (both local and international) participated during the 3 days. Thus, the event has been successful in bringing together researchers, the government agencies, the legal and financial people as well as the key industry players onto a common platform creating new opportunities and strengthening linkages towards achieving the goal of making Malaysia a global biotech hub in the region.

18 - 20 July 2006

Highlights

In keeping with the tradition since 2004, once again, the Institute of Research Management and Consultancy (IPPP) has organized the Research, Inventions & Innovations Exposition from the 18th till the 20th of July 2006 to showcase and to share with the general public the research achievements of UM researchers. For the first time, this event was held at the Dewan Tunku Canselor (DTC), University of Malaya. The theme, ***"Developing Human Capital through Research Excellence & Innovation"***, was chosen to reflect the importance of human capital development as reiterated by the government under the 9th Malaysia Plan. The Exposition was officially opened on the morning of the July 18th by Y.Bhg. Tan Sri Datuk Arshad Ayub, Chairman of the University Board of Directors who then, accompanied by members of the University Management, viewed the research exhibits.

Six (6) galleries were showcased in this expo. They were:

(1) Winners' Gallery (Galeri Juara) – Exhibited were 40 research projects which have won awards at the International Exhibition of Inventions, Innovation, Industrial Design & Technology Exhibition (I.TEX) and Malaysia Technology Expo (MTE) 2006.

(2) Academies/Institutes/Faculties/Centers Gallery (Galeri PTj) – 15 Academies/ Institutes/Faculties/Centers participated in this gallery featuring the various researches in their respective areas.

(3) Services Gallery (Galeri Perkhidmatan) – a special gallery dedicated to the various Centres/Departments/ Units/Institutes offering services in the university. There were seven (7) participations in this Gallery.

(4) Inventions & Innovations Gallery (Galeri Rekacipta & Inovasi) – a total of 78 research projects participated according to the following clusters :
(i) Biosciences & Biotechnology – 12
(ii) Health & Allied Science – 10
(iii) Humanities & Social Sciences – 16
(iv) Engineering & Physical Sciences – 13
(v) Information Technology & Communication – 27

(5) Fundamental Research Gallery (Galeri Penyelidikan Fundamental) – a total number of 132 research projects participated based on the following clusters :
(i) Humanities – 11
(ii) Life Sciences – 40
(iii) Physical Sciences – 24
(iv) Social Sciences - 57

(6) Commercialization Gallery (Galeri Komersilisasi) – this is a new gallery provided specially to showcase research projects with commercialized products or projects with products that are currently at the commercialization stage. Four (4) projects participated in this gallery.

The first day saw panels of judges busy judging projects in their respective galleries for the Best Invention & Innovation as well as the Best High Impact Fundamental Research awards. A total of 157 medals were awarded in the category of Best Invention & Innovation namely; 15 gold, 25 silver and 24 bronze medals while 13 gold, 25 silver and 55 bronze medals were awarded for the Best High Impact Fundamental Research category.

In addition, the special prizes were also awarded based on votes from Expo visitors as follows:

- Best Overall Booth – Academy of Malay Studies
- Most Informative Booth – Faculty of Arts & Social Sciences

- Most Friendly Booth – Faculty of Built Environment
- Most Creative Booth – Academy of Malay Studies

The Expo was well attended by UM students and staff since the new semester was in session. In addition, an estimated 1,500 visitors from numerous schools in the Klang Valley and Selangor visited the three-day Expo.

We, at IPPP would like to take this opportunity to record our heartfelt thank and appreciation to all Expo participants for their support and co-operation in making the Research, Inventions & Innovations Exposition UM 2006 a success!

This year, Biotechnology Asia 2006 was held in Putra World Trade Center (PWTC) Kuala Lumpur from the 9th to 11th of August 2006. The three days event included a conference, an exhibition, innovation award, educational and career seminars. This Asian biotechnology event was officiated by the President of Federation of Asian Biotech Associations Asia (FABA), Dr. Anwar Naseem.

More than 70 biotechnology-related institutions including universities and local and international industries joined the exhibition held at the Tun Abdul Razak Hall. It was estimated that as many as 5000 visitors including trade visitors from more than 15 FABA member countries visited the exhibition.

A total of 16 research projects from UM participated in the Asian Biotechnology 2006 comprising researchers from the Medical Faculty, the Dentistry Faculty, the Science Faculty, the Computer Science & Information Technology Faculty and the Engineering Faculty.

At the Biotechnology Innovation Award giving ceremony which is held on the second day at Tun Hussein Onn Hall in PWTC, the Universiti Malaya was announced as the top medal collector for 2006 with a total of 4 gold, 4 silver and 3 bronze medals, in addition to a special award given as the most informative booth.

This year's awards were divided into 5 categories; namely agriculture (agro-based), industry, medical, health, pharmaceutical and recycled waste matter.

The awards were presented by the FABA president, Dr. Anwar Naseem; the chair of innovation award cum the president of Malaysian Association of Research Scientists (MARS), Wan Manshol Wan Zin, as well as other guests of honour.

The awards received by the UM researchers at the Biotechnology Innovation Award 2006 are as follows:

1. Gold Medal
PedigreePro - A Computer-Aided System for the Recording of Hereditary Diseases and Analysis of Genetic Risk in a Family
Prof. Madya Dr. Ow Siew Hock
Prof. Madya Dr. Thong Meow Keong
Wong Voon Fui

2. Gold Medal
Production of Synthetic Seeds from Somatic Embryos of Selected Ornamental Plants
Prof. Dr. Rosna Mat Taha
Asmah Awal
Dr. Norhayati Daud
Nor Azlina Hasbullah

3. Gold Medal
Development of a Tool to Analyse Trabecular Bone Structure
Prof. Madya Dr. Roziati Zainuddin
Hizmawati Madzin
Prof. Madya Dr. Nor Sabirin Mohamad
Nurfadhlina Mohd. Sharef

4. Gold Medal
A Process for Producing Transgenic Seaweeds via Agrobacterium-mediated Transformation
Prof. Dr. Phang Siew Moi
Dr. Gan Sook Yee
Prof. Dr. Rofina Yasmin Othman

5. Silver Medal
SMIRP - Smart Mini Implant Positioner and Radiograph Holder
Dr. Zamri Radzi
Dr. Noor Azlin Yahya
Prof. Madya Dr. Norzakiah Mohd. Zamzam
Dr. Nor Azuan Osman

6. Silver Medal
Disposable Carrier 2G
Dr. Chai Wen Lin
Prof. Madya Dr. Ngeow Wei Cheong

7. Silver Medal
CD Professional - A Crohn's Disease Double-Mutation Detection Kit
Dr. Chua Kek Heng
Dr. Ida Hilmi
Prof. Goh Khean Lee
Eng Tzi Lui
Dr. Ng Ching Ching

8. Silver Medal
Saliva Substitute for Management of Xerotomia
Drs. Riyanto Teguh Widodo
Prof. Madya Dr. Samsinah Hussain
Prof. Dato' Dr. Mohd. Amin Jalaludin

9. Bronze Medal
Andrographolide - A Potential Selective Anticancer Compound Isolated from Andrographis Paniculata
Prof. Madya Dr. Kim Kah Hwi
Prof. Dr. Cheah Swee Hung
Tan Guak Kim

10. Bronze Medal
The Planning and Simulation of 3D Mandibular Osteotomy for Orthognathic Surgery Using a Computer-based System
Prof. Dr. Selvanathan Narainasamy
Unaizah Hanum Obaidellah

11. Bronze Medal
Wireless Heart Rate Monitoring System
Prof. Dr. Mahmoud Moghavvemi
Liyana Norma Wan Abd. Razak
Saw Jin Huey

12. Most Informative Booth
Universiti Malaya

Awards & Achievements in 2006

From the left: Prof Dato' Goh Khean Lee, Dr Chua Kek Heng, Dr Ida Hilmi

Highlights

1. The research project entitled "Nutation in NOD2/CARD15 Gene in Crohn's Disearse: Experience in An Asian Population" won a Poster Presentation Award at the Inflammatory Bowel Disease Symposium in Sydney, Australia on March 24-25 2005. Over 100 posters from all over the world were presented at the symposium. The researchers of this award winning work are Prof. Dato' Goh Khean Lee, Dr. Ida Himi, Dr. Chua Kek Heng, Eng Tzy Lui, Dr. Ng Ching Ching, Dr. Shanthi Palaniappan and Dr. Lee Way Seah.

Dr. Chua Kek Heng

2. Dr. Chua Kek Heng (right pix) won the Young Investigator's Award at the National Gastroenterology Meeting (GUT 2006) held on the 20-23rd July 2006. Dr. Chua received his education from the Universiti Malaya beginning with a B.Sc degree in microbiology in 1996 and culminating with a doctorate degree in biotechnology in 2003. Dr. Chua has been a lecturer with the Molecular Medicine Department, Faculty of Medicine since 2003.

3. Nazzatush Shimar Jamaludin, a graduate student from the Chemistry Department, won the Best Poster for Poster Presentation Award at the Asian Symposium on Medical Plants, Spices and other Natural Products (ASOMPS) XII held in Padang, Indonesia from the 13th to 18th November 2006. Scientists from 22 countries and 5 continents presented their work in various fields in chemistry during the six days symposium. The title of the award winning project was "Synthesis and Characterization of Substituted Indoles & Tris-hydroxy Derivatives and Their Metal Complexes towards Anti-ulcerogenic Activity on Ethanol-induced Ulcer in Albino Sprague-Dawley Rats". Other researchers involved with this project are Prof. Dr. Hapipah Mohd. Ali, Zuraini Kadir, Emmy Maryati Omar, Najwa Mohd. Idris, Puvaneswary a/p Subramaniam, Assoc. Prof. Dr. Wan Jefrey Basirun and Dr. Mahmood Ameen Abdulla.

4. Two young academic staffs, Dr Seow Liang Lin (Conservative Dentistry) and Dr Wey Man Chek (Orthodontics) from the Dental Faculty have made Universiti Malaya proud by winning 2 of the 6 FDI World Dental Federation/UNILEVER POSTER AWARD prizes with their respective research at the prestigious FDI Annual World Dental Congress, Shenzen, China held on 22-25 September 2006. Dr. Seow's award winning research project is entitled "Biomechanical Behaviour of Endodontically Treated Maxillary Premolars Restored with Bonded All-ceramic Restorations" while Dr. Wey's project is entitled "How Different Mandibular Advancements With Functional Appliances Affect Improvements In Molar Relationship". This is the eighth award (University, National and International Levels) for Dr Seow from her PhD Dissertation. The winners received a Certificate and EURO 1500 each.

5. Australia-Malaysia Fellowship 2006/2007

Dr THONG Meow Keong is a Clinical Geneticist and Consultant Paediatrician at the Department of Paediatrics, Faculty of Medicine, University of Malaya. Dr Thong is one of the pioneers in the field of medical genetics in Malaysia and the first clinical geneticist in Malaysia to be certified by the Human Genetics Society of Australasia. He was instrumental in establishing the first Genetics Clinic and headed the Genetics and Metabolism Unit at the University of Malaya Medical Centre. His research interests include genetic counselling, inborn errors of metabolism and development of genetic services in a developing country.

Newborn screening tests for inborn errors of metabolism (IEM) are routinely carried out to reduce mental handicap and disability in children. IEM comprises a large group of genetic diseases involving biochemical pathways. Each IEM is individually rare but collectively, they occur in about 1 in 2,000 - 3,000 babies. Examples of IEM include mitochondrial diseases, fatty acid oxidation defects, urea cycle defects, organic acidaemias, lysosomal storage disease and amino acid disorders. These are due to errors in genes producing enzymes that are essential in biochemical reactions or metabolism in the body. If left untreated, learning disabilities, physical handicap and even death may oc-

Dr.Seow on the left in the picture and Dr Wey on the right

cur. A good outcome for affected babies is achieved by early (presymptomatic) diagnosis of treatable disorders and facilitation of appropriate treatment.

Professor Wong Khoon Meng

In Malaysia, newborn screening for glucose-6-phosphate dehydrogenase (G-6-PD) deficiency using cord blood prevented mental handicap and deaths in infants. In Australia, all babies are tested on the third day of life for phenylketonuria (PKU) and other conditions. This led to early treatment of about 900 PKU patients, most of whom would otherwise have been severely retarded, but who now lead normal lives. Recent advances in technology resulted in the introduction of "expanded newborn screening" using tandem mass spectrometry (MS/MS), resulted in fast and early diagnosis of many other treatable IEM.

In Malaysia, the Ministry of Health has embarked on a pilot expanded newborn screening programme and a nationwide rollout of the programme may be launched in the near future. A detailed analysis on the outcome and processes must be performed to delineate the benefits and cost-effectiveness of an expanded newborn screening programme in Malaysia. These include methods for selection of disorders to be screened, communication with professionals and the public, evaluation of outcomes, harm minimisation and promotion of research. The Health Ministry of Malaysia announced in a newspaper report (The Star dated 17th Dec 2006) the hope to screen all newborn babies for IEM and the government planned to spend RM1.5 million to screen an estimated 500,000 babies born each year in Malaysia. With such aims, it is imperative that the health service in the country works with all relevant agencies and universities to obtain all the required expertise in this new field of medicine.

Dr Thong will be spending 6 weeks (April – May 2007) at the New South Wales Biochemical Genetics & Newborn Screening Service located at the Children's Hospital at Westmead, Sydney. He will be studying the Australian-wide experience on expanded newborn screening programme and guided by Professor Bridget Wilcken, acknowledged as a world expert in inherited metabolic diseases and expanded newborn screening using MS/MS. This will be a major collaboration in helping to shape the future direction of similar programmes in Malaysia. The network of contacts established will help foster further research between the two countries. Findings generated from the collaboration are expected to be presented in international conferences and published in academic journals.

6. Arnold Arboretum Harvard University Mercer Fellowship: Prof. Wong Khoon Meng, Institute of Biological Sciences

Professor Wong Khoon Meng from the Institute of Biological Sciences, Faculty of Science has been awarded the prestigious Arnold Arboretum Harvard University Mercer Fellowship for his sabbatical leave in 2007. Apart from being a lecturer in the Institute of Biological Science, Prof. Wong is also the coordinator of the Rimba Ilmu gardens, the university's botanical garden. Prof. Wong's research interest included taxonomic revisions in the complex tropical plant groups of the Rubiaceae, the Gramineae Bambusoideae (bamboos) and other families, as well as resource surveys and natural history. Amongst his many contributions are the initiation and coordination of the Botanical Inventory of Brunei Darussalam between the Forestry Department, Brunei and the Royal Botanic Gardens, Kew, U.K. (1989-1994) and the proposition of the Brunei Darussalam's first national park in Temburong (declared in 1994) and the Rainforest Interpretation Centre at Sandakan, Sabah. At the University of Malaya, Prof. Wong helped established the Rain Forests and Our Environment exhibition, the Rare Plants and Orchid Conservatory and is currently developing a bambusetum in Rimba Ilmu. He founded Malaysia's first specialist botanical journal, Sandakania (Forest Research Centre in Sabah) and has served as external reviewer for various journals and regional projects.

Associate Professor Dr Thong Meow Keong

[UM's Research Created an Impact at MAHA 2006]

21 - 26 November 2006

It was hailed as the biggest agricultural show in South East Asia. With a theme of Agriculture is Business, MAHA 2006 held from 21st to 26th November 2006, had attracted 970 exhibitors from various government agencies, research institutions, institutes of higher learning and private sectors. Spread over the picturesque farm setting of the Malaysia Agro-Exposition Park, MARDI, Serdang Selangor, the event also saw the participation of 11 countries. It showcased the progress of Malaysia's agriculture and agro-based industry revving up the momentum towards its new position as the nation's third engine of growth. The exhibition covered five main categories i.e.:

1. Exhibition by various ministries government institutions, institutions of higher learning and financial institutions,
2. Exhibition and sale of food products by agro-based SMEs,
3. Exhibition on latest products, machinery and technology by local and international companies
4. Sale of popular food products, and
5. Exhibition on livestock, padi field and fruits on actual farm sites.

Housed together with the private sectors in Hall C, Universiti Malaya occupied two booths. Amids the dins of sale pitches coming from all sides, we wondered, at first, whether the organizer had made a mistake in putting us there. Our immediate neighbours include a lucrative dried-fruit and nuts stall doing brisk business right in front of us and an organic fertilizer company whose tall sign board proved to be helpful in locating the Universiti Malaya booth. Then there was a new entrepreneur with his heap of vermicompost and right behind us, a farmer busy promoting his loads of dragon fruits. However, this turned out to be a blessing as Universiti Malaya stood out like a refreshing oasis with its commanding crest, giving visitors an insight into its intellectual presence in high-tech agriculture. Having gone to all the fertilizer and fruits stalls, the visitors definitely welcomed something that they do not normaly see in their nite markets.

Universiti Malays's exhibits were modest but very focused on materials that appealed to the the general public as well as entrepreneurs. Two main attractions on show were the tissue culture training program with its do-it-yourself kit and the ever popular herbal tea from mas cotek, an herb claimed to have many medicinal values. The crowd stopped by, asked questions and those interested in the Universiti Malaya's product/activities registered their names for the coming training course at the Universiti Malaya.

Highlights

On the first day, all of our 500 name cards were gone and had to be reprinted. It was estimated that between 1000- 2000 people visited the Universiti Malaya's booth daily, which was opened from 10.00 a.m. to 6.00 p.m. Overall, it was reported that some 700,000 people visited MAHA 2006, which, in addition to the 6 main exhibition halls perched on top of the highest point at the park were the state pavilionsand live animal sections, down in the valley. Huge parking areas were provided at each entrance and people were supposed to be shuttled to their destinations either by tramps or vans. However, further improvement is required as the services were poorly coordinated. Thus, for the next MAHA, which is going to be held at the same place in 2008, proper planning on logistic is required.

While our exhibits were well-received by the crowd, the Universiti Malaya should not have limited the exhibition to only agro-base programs but should also have included information on the university's program such as the postgraduate as well as other special courses and services since would then help promote the university as one of the major research universities in the country. Lastly, appreciation is given to the team who had braved the traffic jams, the rain, the crowd and the long hours in manning the Universiti Malaya's booth. And, for the next MAHA, we may also request the same neighbours since we had clearly benefited from their crowd - pulling sale pitches.

RESEARCH HIGHLIGHT:
CENTRE FOR CIVILIZATIONAL DIALOGUE

Introduction

Background to the establishment of the Centre

(For further information please refer to the centre's brochure)

The Centre for Civilizational Dialogue was established in 1995, with a view of addressing various concerns that were deemed urgent as well as rapidly emerging in the early 1990's, which were of local and global interest. Some of these needs and concerns included the fact that being a plural society, Malaysians need to constantly review the state of health of its "unity in diversity" ideal and reality. This philosophy which had been upheld for as long as Malaysians can claim Nationhood for their country, need always to be consciously revisited and reinvigorated.

Professor Dr. Azizan Baharuddin
Director of Centre for
Civilisational Dialogue

The bases for the worldview and praxes of the spirit of unity from each of the background civilizations of the people of Malaysia needed to be articulated and reimbibed by the new generations of Malaysians. Violent outbreaks threatened to undermine the centuries' old peace and tranquility enjoyed by the region, for example. In this context a group of concerned academicians in the Universiti Malaya at the time (led by the then Deputy Vice Chancellor of Academic Affairs) was instrumental, amongst others, in drawing up the curriculum for the TITAS (Asian Civilization and Islamic Civilization) subject which is compulsory in all the government sponsored universities in the country. Through this course/subject young Malaysians of all races have an opportunity to not only rediscover their own civilization's heritage of values, wisdom and world contributions but also those of their fellow Malaysians'. The centre produced the first text book for the TITAS course which was used throughout the country. Such an effort is not only the first of its kind in Malaysia, but is also unique in the world. Efforts are being mooted to translate this text book in other languages. The centre also scored a first in offering a Masters degree in Civilizational Studies. Universiti Malaya can be proud of the fact that many of the graduates from this course have gone to become lecturers for TITAS and related subjects/ course in all the local universities in the country.

Another important reason for the establishment of the centre is the prevailing world situation. In 1993 Samuel P. Huntington wrote the thesis of the "Clash of Civilizations" which he argued would be inevitable as a result of globalisation and the ending of the cold war. In this context, the Asian wisdom and experiences of which Malaysia has a proud heritage of, cannot allow the situation to be unchallenged. Therefore in the context ASEAN at least, the establishment of the centre was also to promote intra Asian Civilizational understanding towards the promotion of an alternative theory of relationship of civilizations of the future, which is the theory of "Peaceful Coexistence". Towards this end the centre organized a series of groundbreaking international conferences and meetings, in one of which even Huntington himself was invited! Expanding this idea, the centre has also focused on a research headed by Professor Emeritus Dato' Dr. Khoo Kay Kim on the theme of "Malaysia Truly Asia" which is also the current slogan for the country's tourist industry. Related to the idea of building upon the Asian-Islamic Civilization, Katha, the journal of the centre was launched in 2003. Katha is Sanskrit for "discourse" or "dialogue" and is also the word from which the Malay kata is derived. For this idea, the centre is thankful to Prof. Lim Chee Seng, an associate fellow of the centre.

Another strong element in making the centre a successful venture "within the Universiti Malaya is the fact that its subject matter, issues of concerns and questions being asked actually draw upon the expertise that the university already has amongst the various Faculties and Academies; the most notable being the Chinese Studies, Indian Studies, Islamic Studies, Malay Studies and the History and Philosophy group at the Faculty of Science. Very often postgraduates, local and from overseas, pursue their research in the field of the dialogue of civilization under the direct or indirect supervision of these experts. Most recently two scholars', Ms. Julie Chernov, University of Colorado, USA and Ms. Veronica Rovoletto, Universidad De Barcelona, Spain come under this category. Other postgraduates generally register with the vibrant Institute of Postgraduate Studies whilst enjoying supervision solicited or identified by the centre from amongst its fellows and network.

Dialogue of Civilisations as an Emerging Field

There are many reasons why dialogue between civilizations is of paramount importance in the world today. For the first time in human history civilizations, cultures and communities are compelled to relate to one another on a constant and con-

tinuous basis. Yet mutual ignorance exacerbated by mutual suspicion and hostility inhibit them from establishing ties that endure and flourish. Sometimes hostilities erupt into bloody conflicts. Therefore dialogue of civilizations is an inevitable fact and need, which will allow for a greater, mutual understanding between faith groups, cultures and ethnic communities.

Professor J. W. Morris
Visiting Scholar on Spirituality & Civilisation

Another reason for dialogue is the fact that while compelling different groups to face and relate to one another, globalization propelled by powerful economic and technological forces threaten to homogenise differences among civilizations besides threatening to create a hegemonic and purely materialistic civilization that is antagonistic to spiritually and ethically based norms and civilizations.

In this context dialogue of civilizations is a necessity because it does not only allow a greater understanding of fundamental principles and practices that distinguish the various communities but that it also throws light on the affinities that exist between civilizations. Dialogue of civilization then not only enables the celebration of similarities and respect for differences but is also the only way for evolving a more just and compassionate world civilization which is the alternative desperately sought after today through such bodies as the United Nations.

Dialogue on "Islam In The United States of America and Malaysia"

Peace Pole presented by the Taiping Peace Initiative Group

As a field of study, dialogue of civilization is an emerging field, multidisciplinary in nature. Dialogue is a concept, a process as well as a mechanism, critically important today as an alternative to violence in the event of conflict, which is bound to take place as technology and globalization force people to deal with one another at a rate and in a degree far greater than has ever taken place in the past, in human history. Dialogue helps to identify what are "agreed" upon and what are not; what areas are important, and what should be done about the matters that are important and that have been agreed upon regarding issues being faced vis-à-vis the environment, the increasing gap between the rich and the poor, violence perpetrated in the name of religion, ethnic clashes, differences between the East, Islam and the West, rampant materialism and dehumanization as a result of a lack of ethical considerations in the development and utili-

zation of science and technology for example.

Dialogue of civilizations allows the drawing upon of common spiritual, cultural and civilisational values, which are valid facts of our existence, to address some of the fundamental issues facing humankind (as mentioned) whilst combining these with scientific facts gathered through all fields of knowledge such as economics, science, sociology medicine, engineering and others.

Activities

The main activities of the Centre include:

1. Providing the forum/opportunity for dialogue in the form of Seminars, Workshops and the like.
2. Conducting short courses on subjects that are related to dialogue of civilizations.
3. Providing Fellowships for visiting scholars who are interested to contribute in the field.
4. Publishing Research on and other materials in the field.
5. Providing expert knowledge and supervision for post graduates and students interested in the field.

Current Research Areas

a) Study on the meaning of and the consolidating of the major elements of civilization both locally and globally.
b) Study on the civilisational resource for ethics and its inculcation in governance, education, economics as well as science and technology such as in bioethics and environmental ethics.
c) Study on the history, challenges and future scenario of the relationship between cultures & civilizations especially between the East including Islam and the West. What will the "world civilization" or "civilizations of the world" look like in the future for example.
d) Studies on religion and society.
e) Studies on Conflict and capacity building for peace.

These research clusters require multidisciplinary approaches and researchers from different areas of expertise but who have a common interest in the problems being discussed are most welcomed. With the appointment of a senior research fellow, 10 associate fellows and the tenure of 4 visiting Scholars the Centre looks forward to a more vibrant expansion of programs and activities in the field in 2007 (Table 1) as well as the years ahead.

Table 1: MAIN ACTIVITIES FOR 2007

I. PUBLIC LECTURES

1	4 January 2007	Public Lecture on Civilizational Dialogue: The Australian Experience In Historical Perspective' by Professor Constant J. Mews, Director, Centre For Studies In Religion and Theology, Monash University.
2	April 2007	Public Lecture by Profesor Dr. Alastair Stephen Gunn, Waikato University, New Zealand.
3	July 2007	Public Lecture by Dr. Eric Winkel Bridge Academy Charter School, Las Vegas, New Mexico
4	Nov. 2007	Public Lecture by Profesor Dr. Carl Ernst Zachary Smith Professor, Dept. of Religious Studies University of North Carolina, U.S.A

II. INTERNATIONAL CONFERENCES

1	20-21 March 2007	International Conference on Bioethics & Civilisation: Challenges to Human Values. (Budget from UNESCO).
2	1-3 May 2007	International Conference on Environmental Ethics & Education for Sustainability (Budget from Asia Pacific Network)
3	4-5 July 2007	International Conference on Intercultural Discource Towards Peace & Unity Within ASEAN (UNESCO)
4	28-29 August 2007	International Conference re World Faith Traditions on Environmental and Ecological Health

III. NATIONAL SEMINARS

1	25-26 July 2007	National Seminar on Tassawuf as a Basis for Ethics
2	15-16 December 2007	National Seminar on "Masa Depan Kedamaian Antara Etnik dan Budaya di Malaysia: Melihat 50 Tahun ke Masa Hadapan"

IV. SHORT COURSES

1	17-18 April 2007	Short Course on Islam Hadhari

V. VISITING SCHOLARS PROGRAMMES

1	March - May 2007 (3 months)	Visiting Scholars Programme - Profesor Dr. Alastair Stephen Gunn, Waikato University, New Zealand.
2	June – August 2007 (3 months)	Visiting Scholars Programme - Dr. Eric Winkel Bridge Academy Charter School, Las Vegas, New Mexico
3	Sept. – Nov. 2007	Visiting Scholars Programme - Profesor Dr. Carl Ernst Zachary Smith Professor, Dept. of Religious Studies University of North Carolina, U.S.A

Dr. Azzam Tamimi, Director Institute of Islamic Political Thought, London

Research
Some recent highlights:

A)
1. Globalisation of Language and Culture.
2. Reevaluating the Clash of Civilisations Theory in the Light of Dialogue

By Associate Professor Dr. Stefan Bucher. (Visiting Scholar Programme from October 2006 – December 2006)

B)
1. Environmental Ethics and Sustainable Development.
2. Civilisational Dialogue and Integrity.

By Associate Professor Dr. Alastair Stephen Gunn (Visiting Scholars Programme from September 2006 – December 2006)

Achievements
In its 10 years of existence, the Centre has succeeded in:

1. Building a network of about 30 related institutions overseas and about 15 local government and non-government related organizations locally.
2. Organising 10 successful international and 20 national conferences and scores of public lectures on various topics and issues.
3. Hosted and received about 100 international scholars, visitors, researchers.
4. Published a journal KATHA (Inaugural, Volume 1, Volume 2); 8 books; 10 monographs; 3 proceedings; 3 occasional papers; 3 research reports. The Centre is also in the process of printing 3 more new titles at the moment.

The Centre's work has received recognition locally and abroad. This is seen from the inputs it has given to the Department of Unity and National Integration, Prime Minister's office, the Ministry of Foreign Affairs, Institute For Islamic Understanding (IKIM), Foundation for Islamic Dakwah (YADEIM) and others. Internationally, the centre has been consulted on matters pertaining to programs and activities related to the dialogue of civilization as well as intercultural and interfaith dialogue. To name a few organizations that the centre has had affiliations and are doing work are Partners in Humanity headed Prince Hasan Al-Talal Jordan, the USD Embassy Cultural Division, the Soka Gakkai, Museum of World Religious, Taiwan, the International Development Research Centre, Canada, the Social Economic Development Services (SEDS), the World Bank Urban Poverty Alleviation Project, Jakarta. In addition, the centre also networks with various universities and centres related to peace studies and dialogue. In this regard as already mentioned the centre has received scholars from many countries including the UK, US, Australia, New Zealand, India, Japan, China, Germany, Spain, Taiwan, Singapore, Indonesia, Khazakhistan, Thailand, Canada and others.

Some of the conferences at which the centre has been invited to present its views include:-

- The Summit of World Spiritual leaders, United Nation , New York 2002
- The Conference of Women Spiritual leaders, Geneva, 2003
- The Conference in Interfaith Dialogue, ASEM, Bali 2004
- Partners in Humanity Conference in Amman, Jordan, 2003
- South-east Asian Conflict Newtwork related Conferences in Vietnam and Cambodia, 2003, 2005.

Under the Universiti Malaya's list of MoU's with international organisations, the centre is especially linked with those signed with the Oxford Centre for Islamic Studies and Al-Maktoum Institute in Aberbeen.

The Future
With the current emphasis on the internationalization of the university, it is obvious what the role and importance of the centre is. With increasing support from the University's administration and academic expertise, the centre is poised to be a major point for the meeting and exploring of new ideas much needed today for the creation of a new vision of the peaceful coexistence of the different cultures, ethnicities and civilizations of the world. The centre hopes to intensify its research and publication activities whilst assisting prospective researchers and postgraduates pursue their studies at the Universiti Malaya.

Professor Ng Kwan-Hoong, Department of Biomedical Imaging, Faculty of Medicine, University of Malaya

The inauguration of the ICSU Regional office in Kuala Lumpur was held at the Palace of the Golden Horses on the 19th September, 2006. I had the privilege of representing the International Union of Physical and Engineering Science in Medicine (IUPESM) to attend this historical event. The event was graced and officiated by the Deputy Prime Minister of Malaysia, YAB Dato' Seri Najib Tun Abdul Razak. Also in attendance were the President of ICSU, Professor Goverdhan Mehta; President-Elect of ICSU, Professor Catherine Brechignac; Executive Director of ICSU, Professor Thomas Rosswall; Nobel Laureate Professor Yuan-Tseh Lee; and other eminent international scientists who were in Malaysia attending the 'Regional Conference on Natural and Human-Induced Environmental Hazards and Disasters'. All in all, this event was attended by about 200 guests from all over the world.

The role of the KL-ICSU regional office is to promote the development of science throughout Asia and the Pacific region. It will also help strengthen the voice of developing countries in an international setting and ensure that scientists from the region become involved in those aspects of ICSU's 2006-2011 Strategic Plan that are specially relevant for this area. A renowned Malaysian environmental scientist, Emeritus Professor Mohd Nordin Hasan is the appointed Director of the Regional Office.

"The opening of this office is a truly momentous occasion for ICSU," said Thomas Rosswall, Executive Director of ICSU, based in Paris. "The proposal that ICSU should establish four Regional Offices in and for developing countries met with enthusiastic support at the ICSU General Assembly in 2002". Malaysia was chosen to host the Regional Office after consultations with ICSU National Members in Asia and the Pacific. Selection criteria included the host being based in a scientific institution with good links to similar establishments in the region and long-term financial support from the host institution and its national government.

The President-Elect, Professor Brechignac, a well-known French physicist gave an overview talk on the future of nanotechnology at the event. In several occasions, she highlighted the important role played by physics in promoting medical advances and humanity.

Professor Goverdhan Mehta, President of ICSU and Emeritus Professor in the Department of Organic Chemistry at the Indian Institute of Technology in Bangalore said, "there are definitive signs of science in Asia forging ahead and we hope that the Regional Office will capitalize on this resurgence and help harness its potential through collaboration for the socioeconomic development of the region. This is a memorable day for ICSU", a sentiment echoed by all present at the event.

by Professor Ng Kwan-Hoong, Department of Biomedical Imaging, Faculty of Medicine, University of Malaya

'Bengkel Peningkatan Kualiti Kerja & Motivasi IPPP' and IPPP Family Day

As The 'Bengkel Peningkatan Kualiti Kerja & Motivasi IPPP' and IPPP family day was held at Suria Cherating Kuantan Pahang on 15, 16 & 17 September 2006.

The main objectives for the workshop were:

1. To enhance IPPP staff's motivation
2. To enhance quality of work of IPPP staff.

On hand to act as the facilitator at the workshop were Assoc. Prof. Dr. Fauzi Deraman from Academy of Islamic Study and Assoc. Prof. Dr. Mohd. Sahar Yahya from the Institute of Mathematics, Faculty of Science, Universiti Malaya.

About 47 staff from the Director's Office and other units under IPPP such as Sponsored Research Unit (UPDiT), Research Development Unit (UPP), Technology Transfer & Commercialization Unit (UPTK), Consultancy Unit (UPUM), Radiaction Protection Service Unit (UPPS) and Research Laboratories (Labs) attended the workshop.

Dr. Fauzi Deraman presented a papers entitled 'Kerja dan Tanggung Jawab' (Work and Responsibility) by Dr. Fauzi Deraman where he stressed on the responsibility and commitment by a staff to his/her job. Dr. Fauzi also presented a second talk on 'Konsep Kerja Berpasukan' (Concept of Teamwork) while Dr. Mohd. Shar presented a talk on 'Pemantapan Kualiti Kerja Berpasukan' (Enhancing Teamwork Quality)

The workshop very useful to all staff who attended since it helps to motivate and inspire staff to be more responsible in doing their jobs.

Following the workshop, the staffs were treated to a family day program which involved some games prepared by the hotel management and the IPPP NADI.

Reported by Mohd. Rosdi Ahmad

Welcome

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Thank you

Prof. Dr. Mohd Rais Mustafa

Mrs. Masrina Masran

Ms. Rosaini Haryati Rosli

Ms. Haizanlia Abd Rahman

Ms. Nor Samsiah Binti Sani

Ms. Haizanlia Abd Rahman

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List of Selected exhibitions for 2007

Event	Venue	Date
Engineering Invention 'N' Innovation Challange (EINIC 2007)	DTC	26-28 Februari
Natural Products Expo (NATPRO)	PWTC	29-31 March
Malaysian Technology Expo (MTE) International Exhibition of Inventions of	PWTC	29-31 March
Expo Harta Intelek	KLCC	27 April
Bio 2007	Boston, USA	6-9 May
International Invention, Innovation, Industrial Design and Technology Exhibition (ITEX)	KLCC	18- 20 May
Biotechnology Asia	PWTC	12-14 June
Ekspo Penyelidikan, Rekacipta dan Inovasi UM	DTC	26-28 July
Ekspo PECIPTA R&D IPTA	KLCC	10-12 August
British Invention Show (BIS)	London	17-21 October
International Exhibition "Ideas - Inventions - New Products" (IENA)	Nuremberg, Germany	1-4 November